

CLAIMS

1. An injection system for injecting fluid into a patient, the injection system comprising:
 - a fluid delivery apparatus;
 - a fluid path structured to be disposed between the fluid delivery apparatus and the patient;
 - a control unit in communication with and operable to control the fluid delivery apparatus; and
 - a control mechanism in communication with the control unit and in fluid communication with the fluid path, the control mechanism comprising a sensor that generates and sends a signal to the control unit,

whereby the control unit controls the injection of fluid into the patient in proportion to the signal.
2. The injection system of Claim 1 wherein the control mechanism is hand-operated.
3. The injection system of Claim 1 wherein the control mechanism further comprises an actuator mechanism in communication with the sensor.
4. The injection system of Claim 3 wherein the sensor senses movement of the actuator mechanism by an operator.
5. The injection system of Claim 4 wherein the signal generated by the sensor is proportional to the movement of the actuator mechanism.
6. The injection system of Claim 3 wherein the actuator mechanism comprises a plunger.
7. The injection system of Claim 1 wherein the sensor comprises a potentiometer.
8. The injection system of Claim 3 wherein the flow rate of the fluid is controlled by the control unit.

9. The injection system of Claim 1 wherein the control mechanism is reusable.
10. The injection system of Claim 4 wherein the volume of injected fluid is proportional to the displacement of the actuator mechanism.
11. The injection system of Claim 4 wherein the flow rate of injected fluid is proportional to the rate of displacement of the actuator mechanism.
12. The injection system of Claim 4 wherein the flow rate of injected fluid is proportional to the displacement of the actuator mechanism.
13. The injection system of Claim 1 wherein the proportional relationship between the signal and the injection of fluid is a substantially linear relationship.
14. The injection system of Claim 1 wherein the pressure generated by the fluid in the fluid path is communicated to the control mechanism.
15. The injection system of Claim 1, further comprising a manifold disposed in the fluid path between the fluid delivery apparatus and the patient.
16. The injection system of Claim 15 wherein the control unit is in communication with and is operable to control the manifold.
17. The injection system of Claim 15 wherein the manifold is manually operated.
18. The injection system of Claim 15 wherein the manifold is power activated.
19. The injection system of Claim 1, wherein the sensor is an integrated element of the control mechanism.
20. The injection system of Claim 1, wherein the control mechanism further comprises a tactile feedback control unit.
21. The injection system of Claim 1, wherein the control mechanism further comprises a syringe and the sensor is formed on a cradle coupled to the syringe.